ABSTRACT OF THE DISCLOSURE

The present invention provides a silicon/silicon carbide composite and having a high quality in avoiding warp or breakage and in a corrosion resistance, a durability, a heat shock resistance and particularly suitable used for semiconductor heat treatment member such as a dummy wafer or the like and a process for manufacturing a high purity silicon/silicon carbide composite containing a limited amount of carbon left without reaction.

The present invention uses a silicon/silicon carbide composite comprised of 45 to 75 weight% of silicon and 25 to 55 weight% silicon carbide, said silicon carbide being formed from an assembly of fibers each having a thickness of 150 μm or less and a length of 0.8 to 3.5 mm.

The present invention is directed to a process for manufacturing a silicon/silicon carbide composite which comprises a first step where cellulose fibers with a fiber thickness of 150 μm or less is heated at a temperature of 500°C to 1500°C in a non-oxidizing atmosphere to produce a porous carbon body with a bulk density of 0.10 to 0.80 g/cm^3 and a second step where said porous carbon body is silicification in an atmosphere containing silicon.